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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,360	08/11/2005	Michel Maquaire	122090	2979
25944	7590	01/29/2008		
OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850			EXAMINER RIVELL, JOHN A	
			ART UNIT 3753	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/519,360

Applicant(s)

MAQUAIRE ET AL.

Examiner

John Rivell

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12/11/07 (amendment).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Applicant's arguments filed December 12, 2007 have been fully considered but they are not persuasive.

New claims 9-11 have been added. Thus claims 1-11 are pending.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 8-11 are rejected under 35 U.S.C. §102 (b) as being anticipated by Dischler (U. S. Pat. No. 6,345,649).

The patent to Dischler discloses, in figures 7 and 9, two separate embodiments each of which include for example, a "single valve, comprising: a seat (read at the surface of port 150 in fig. 7 or at the diaphragm facing surface of port 250 of fig. 10) with an opening (150 or 250); and a semi-rigid membrane (bi-stable element 144 or 244) with one or several openings (one opening at 148 in each embodiment) and which is structured to successively adopt two stable positions (e.g. open or closed), wherein the membrane (144 or 244) in a first stable position closes the opening in the seat" as recited in claim 1 by either placing sealing plug 162, a part of the membrane, into port 15 as shown in fig. 8 or by pressing resilient cushion 248 against the opening as shown in Fig. 10.

Regarding claim 2, in Dischler "the seat (at ports 150 or 250) and the membrane (144 or 244) are assembled such that the membrane in a first stable position prevents a

circulation of fluid (see fig. 8, closed) and in a second stable position allows the circulation of fluid (figs. 7 and 9, open)” as recited.

Regarding claim 3, in Dischler, “the membrane (144 or 244) is open so as to create a difference in pressure on either side of the single valve during the circulation of fluid”. That is, when the valve 102 or 202 is open, the port 150 or 250 permits the creation of a difference in pressure across the membrane 144 or 244.

Regarding claim 4, in Dischler, “the single valve (144 or 244) is activated by the difference in pressure upstream and downstream of the single valve” as recited.

Regarding claim 5, in Dischler, “the membrane (144 or 244) is made of a polymer” as it is manufactured by molding.

Regarding claim 8, the recitation “An inflation and deflation valve” is considered nothing more than a name given the claimed device. As such it carries no patentable weight and the device of Dischler is thus considered to be a similar “inflation and deflation valve comprising the single valve according to claim 1” as recited.

Regarding claim 9, in Dischler, “the seat (at the port 150 or 250) is of revolution and incorporates at its center an opening (150 or 250)’ as recited.

Regarding claim 10, in Dischler, “the one (148 of each embodiment) or several openings in the membrane are disposed around a circular portion with a diameter greater than a diameter of the opening in the seat” as recited.

Regarding claim 11, in Dischler, “the membrane (144 or 244) sits against the opening (at port 150 or 250) of the seat to close the opening in the seat” as recited.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dischler in view of Rieckhoff (U. S. Pat. No. 5,855,221).

The patent to Dischler discloses all the claimed features with the exception of having the valve element "made by stamping a metal sheet".

The patent to Rieckhoff discloses that it is known in the art to employ a perforated metallic dome at 26, functioning as the actuator of a valve element that is maintained in "two stable positions" by the snap action of the metallic dome for the purpose of maintaining the valve element in its opposite extreme positions of actuation utilizing a snap acting actuator of metallic material that is capable of withstanding environmental conditions that a polymer element would otherwise not be able to withstand. Clearly the metallic dome element 26 of Rieckhoff "made by stamping a metal sheet".

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Dischler a metallic element, in place of the polymer material of element 42 for the purpose of maintaining the valve element in its

opposite extreme positions of actuation utilizing a snap acting actuator of metallic material that is capable of withstanding environmental conditions that a polymer element would otherwise not be able to withstand as recognized by Rieckhoff. Clearly, such a metallic dome element can be "made by stamping a metal sheet".

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dischler in view of Frye (U. S. Pat. No. 3,084,707).

The patent to Dischler discloses all the claimed features with the exception of having "the membrane... made by duplicate molding an elastomer onto a metallic core grid".

The patent to Frye discloses that it is known in the art to employ an elastomeric diaphragm element 22 containing a reinforcing metallic element 32 for the purpose of reinforcing the otherwise polymeric valve diaphragm 22.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Dischler a metallic element embedded within the polymeric element 42 for the purpose of reinforcing the polymeric valve diaphragm 42 as recognized by Frye. Clearly the resultant embodiment can be "made by duplicate molding an elastomer onto a metallic core grid" as recited.

Further, concerning claims 6-7 applicants attention is directed to M.P.E.P. §2113 which specifically discusses, in pertinent part:

**2113 Product-by-Process Claims [R-1]**

**PRODUCT-BY-PROCESS CLAIMS ARE NOT LIMITED TO THE  
MANIPULATIONS OF THE RECITED STEPS, ONLY THE STRUCTURE  
IMPLIED BY THE STEPS**

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*,

777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted) (Claim was directed to a novolac color developer. The process of making the developer was allowed. The difference between the inventive process and the prior art was the addition of metal oxide and carboxylic acid as separate ingredients instead of adding the more expensive pre-reacted metal carboxylate. The product-by-process claim was rejected because the end product, in both the prior art and the allowed process, ends up containing metal carboxylate. The fact that the metal carboxylate is not directly added, but is instead produced in-situ does not change the end product.).

>The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., *In re Garnero*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979) (holding "interbonded by interfusion" to limit structure of the claimed composite and noting that terms such as "welded," "intermixed," "ground in place," "press fitted," and "etched" are capable of construction as structural limitations.)<

Thus applicant should be aware that the patentability of claims 6-7 rests on distinguishing structural elements claimed and not the method of manufacture.

### ***Response to Arguments***

Regarding applicants remarks as they may apply, while the amendments to claim 1 overcome the reading of the claim(s) on the embodiment of figure 2 of Dischler, the embodiments of figures 7 and 9 clearly demonstrate a valve device including a bi-stable diaphragm, 144 or 244 in which the diaphragm seats against a seat surrounding the inlet port opening to close off the opening in the manner claimed. Such a bi-stable membrane valve device is therefore considered to be inclusive of the advantages argued such as simplification of the manufacture of the valve.


**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (571) 272-4918. The examiner can normally be reached on Mon.-Fri. from 6:00am-2:30pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**John Rivell**  
**Primary Examiner**  
**Art Unit 3753**

j.r.